

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Cancelled)

2. (Currently Amended) The device of claim 4 7 wherein the first axis and second axis are orthogonally opposed and the third axis and the fourth axis are orthogonally opposed.

3. (Currently Amended) The device of claim 4 7 wherein the first compound movable joint is capable of rotating about the a linear axis of the strut assembly and the second compound movable joint is capable of sliding along the linear axis of the strut assembly.

4 – 6. (Cancelled)

7. (Currently Amended) A unilateral fixator comprising:
a strut assembly having a proximate end and a distal end;
a first compound movable joint attached to the proximate end of the strut
assembly having a first revolute joint with a first axis and a second revolute joint with a
second axis;
a second compound movable joint attached to the distal end of the strut
assembly having a third revolute joint with a third axis and a fourth revolute joint with a
fourth axis; and
a bone fragment attachment apparatus attached to each of the first and second
compound movable joints, wherein each of the revolute joints comprises a gear
reduction mechanism, The device of claim 4 wherein the gear reduction mechanism
comprises comprising:
a left-hand helical spline;
a right-hand helical spline;
a thrust washer positioned between the right-hand helical spline and the left-hand
helical spline;
a helical spool, wherein the helical spool slides within the right-hand helical spline
and the left hand helical spline and is rotationally engaged to the right-hand helical
spline and the left hand helical spline; and
a cap screw axially clamping together the left-hand helical spline, the right-hand
helical spline, and the thrust washer and allowing for a fine adjustment of the reduction
mechanism while the bone fragment attachment apparatus is engaged with a bone
fragment.

8. (Cancelled)

9. (Currently Amended) The device of claim 4 7, wherein the strut assembly comprises:

a base strut; and

an extension strut; wherein the extension strut moves linearly within the base strut.

10. (Original) The device of claim 9, wherein the base strut further comprises a square key inserted into a milled slot and the extension strut further comprises a groove able to receive the square key to prevent the base strut and extension strut from rotating relative to each other.

11. (Currently Amended) The device of claim 10 wherein the extension strut further comprises a linear adjuster, a threaded rod and a solid, threaded locking insert, wherein the linear adjuster is connected to the base strut and the threaded rod, the threaded rod is also connected to the Solid solid, threaded locking insert which is connected to the extension strut.

12. (Original) The device of claim 11 wherein when the linear adjuster is rotated, the extension strut moves linearly within the base strut.

13. (Currently Amended) The device of claim 4 7 wherein the bone fragment attachment apparatus comprises a pin clamp and one or more pins.

14. (Currently Amended) The device of claim 4 7 wherein the first and second compound movable joints each comprise a plurality of locking devices, wherein one or more of the locking devices restricts one of the degrees of freedom associated with each compound movable joint.

15. (Original) The device of claim 14 wherein each of the locking devices comprises at least one cap screw, wherein the cap screw secures a housing containing the gear reduction mechanism to allow for the gross positioning of the first compound movable joint and the second compound movable joint.

16 – 33. (Cancelled)